

Comparative advantages StudyFinal Technical Report

BUDGET #2 - POST-HARVEST ACTIVITY FARM TO PROCESSOR																	
SYSTEM network irrigated cotton large ginery																	
MAIN OUTPUT raw cotton					CURRENCY sp					CONVERSION RATE							
LENGTH OF PRODUCTION CYCLE					PRODUCTION UNIT ton					MAIN OUTPUT BY PRODUCT 1.000							
Budget #2 computed in sp by ton of raw cotton										Losses (%) 0.0%							
B2: FIXED INPUT	TOTAL ANNUAL CAPITAL COST				Initial Cost	Salvage Value	Capital Recovery rate	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price
	Life-Time	Used up Value	Market	Social				L	LQ	K	TI		L	LQ	K	TI	
	0	1	5.5%	3.0%	0	0	0.000	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0
	0	1	5.5%	3.0%	0	0	0.000	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0
TOTALS								0	0	0	0	0	0	0	0	0	0
BUDGET #2 - POST-HARVEST ACTIVITY FARM TO PROCESSOR																	
Revolving																	
B2: DIRECT LABOR	Budget information				Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price		
	Unit	Price	Quantity	Freq		LNG	LQ	K	TI		LNG	LQ	K	TI			
	0	0	0	0	1.00	1.00				0	1.00	0.00					0
	0	0	0	0	1.00	1.00				0	1.00	0.00					0
TOTAL					0	0	0	0	0	0	0	0	0	0	0	0	0
BUDGET #2 - POST-HARVEST ACTIVITY FARM TO PROCESSOR																	
Revolving																	
B2: INTERMEDIATE INPUT	Budget information				Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price		
	Unit	Price	Quantity	Freq		LNG	LQ	K	TI		LNG	LQ	K	TI			
	0	0	0	0	1.00				1.00	0	0.00	0.00	0.00	0.00	0		
	0	0	0	0	1.00				1.00	0	0.00	0.00	0.00	0.00	0		
	0	0	0	0	1.00				1.00	0	0.00	0.00	0.00	0.00	0		
Interest on Revolving Fund		at market	5.5%	13210	0	0			1.00	0			0.00	0.00	0		
		at social	3.0%	19104	0	0			0.00	0			1.00	0.00	0		
TOTAL		rate	amount	year					0	0	0	0	0	0	0	0	0
BUDGET #2 - POST-HARVEST ACTIVITY FARM TO PROCESSOR																	
B2: COMMODITY IN PROCESS																	
	Unit	Price	Quantity	TOTAL						TOTAL Market					TOTAL Social		
raw cotton	ton	13210	1	13210	1.00					13210					19104		
TOTAL					0.00					13210					19104		
BUDGET #2 - POST-HARVEST ACTIVITY FARM TO PROCESSOR																	
B2: REVENUES																	
	Unit	Price	Quantity	TOTAL						TOTAL Market					TOTAL Social		
raw cotton	ton	13210	1	13210						13210					19104		
		0	1	0						0					0		
		0	0	0						0					0		
TOTAL REVENUES										13210					19104		
TOTAL COST										0					0		
PROFIT (BEFORE TAXES)										0					0		
B2: DIRECT TAXES										0					0		
TOTAL										0					0		
PROFIT (AFTER TAXES)										0					0		

  

Wages Discrepancies L:NG	Taxes on L:Q	K	-- TI --		Exch Rate	Price Before Tax	Salvage Value Before Tax	Coef Recovery rate	Initial disaggregation of equipment				Control TOTAL
			ad valorem	fixed					L	LQ	K	TI	
1	26%	0%	0%	0	1	0	0	0.000				1.00	1.00
1	26%	0%	0%	0	1	0	0	0.000				1.00	1.00
social price (before depreciation and import taxes)													
1	26%	0%	0%	0	1	0	0	0.000				1.00	1.00
1	26%	0%	0%	0	1	0	0	0.000				1.00	1.00
1	26%	0%	0%	0	1	0	0	0.000				1.00	1.00

BUDGET #3 - POST-HARVEST ACTIVITY PROCESSING															SYSTEM network irrigated cotton large ginery																			
MAIN OUTPUT					CURRENCY					CONVERSION RATE					CAPACITY																			
LENGTH OF PRODUCTION CYCLE					PRODUCTION UNIT					BY PRODUCT					CAPACITY UTILISATION																			
12 minutes					sp by ton					0.32					56180																			
Budget #3 computed in					sp by ton of lint cotton					0.030					100%																			
					Losses (%)					0.0%																								
TOTAL ANNUAL CAPITAL COST																																		
B3 FIXED INPUT	Life	Used up	Market	Social	Initial Cost	Salvage Value	Recovery rate	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price	Wages Discrepancies L:NO	Taxes on L -O	K	ad valorem	TI	fixed	Exch Rate	Price Before Tax	Salvage Value Before Tax	Def Capital Recovery rate	Initial disaggregation of equipment					Control TOTAL	
								L	L	O	K		TI	L	L	O												K	TI	L	L	O		K
BUILDING	50	1	5.5%	3.0%	1996	0	0.059	0.10	0.03	0.79	0.08	118	0.15	0.04	0.64	0.15	59	1	26%	0%	30.0%	0	1	1535	0	0.039	0.30	0.10	0.30	0.30	1.00			
MACHINE	20	1	5.5%	3.0%	557	0	0.084	0.03	0.03	0.47	0.47	47	0.04	0.03	0.33	0.60	37	1	26%	0%	1.7%	0	1	548	0	0.067	0.05	0.05	0.10	0.80	1.00			
GENERATOR	20	1	5.5%	3.0%	891	0	0.084	0.03	0.03	0.47	0.47	75	0.04	0.03	0.33	0.60	58	1	26%	0%	1.7%	0	1	876	0	0.067	0.05	0.05	0.10	0.80	1.00			
Cars normal	15	1	5.5%	3.0%	55	0	0.100	0.03	0.03	1.07	0.47	5	0.04	0.03	1.00	0.64	7	1	26%	0%	14.5%	0	1	48	0	0.084	0.05	0.05	1.00	0.00	1.90			
Cars pick up	15	1	5.5%	3.0%	91	0	0.100	0.03	0.03	1.07	0.47	9	0.04	0.03	1.00	0.64	11	1	26%	0%	14.5%	0	1	79	0	0.084	0.05	0.05	1.00	0.80	1.90			
Cars large pick up	15	1	5.5%	3.0%	95	0	0.100	0.03	0.03	1.07	0.47	10	0.04	0.03	1.00	0.64	12	1	26%	0%	14.5%	0	1	83	0	0.084	0.05	0.05	1.00	0.80	1.90			
Tractors	25	1	5.5%	3.0%	257	0	0.075	0.03	0.03	1.04	0.42	19	0.03	0.03	1.00	0.56	23	1	26%	0%	1.7%	0	1	252	0	0.057	0.05	0.05	1.00	0.80	1.90			
Liter	25	1	5.5%	3.0%	110	0	0.075	0.03	0.03	1.04	0.39	9	0.03	0.03	1.00	0.56	10	1	26%	0%	10.0%	0	1	107	0	0.057	0.05	0.05	1.00	0.00	1.90			
Liter	0	1	0.0%	0.0%	0	0	0.000	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	1	26%	0%	0%	0	1	0	0	0.000	0.00	0.00	0.00	0.00	0.00			
TOTALS															17 9 204 89 291 15 7 133 103 217										social price (before depreciation and import taxes)									
BUDGET #3 - POST-HARVEST ACTIVITY PROCESSING																																		
Budget information																																		
B3 DIRECT LABOR	Unit	Price	Quantity	Freq	TOTAL	Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price	Wages Discrepancies L:NO	Taxes on L -O	K	ad valorem	TI	fixed	Exch Rate											
							L:NO	L:O	K	TI		L:NO	L:O	K	TI																			
permanent labour	sp/ton	145.3615	1	1	145	1.00					145	0.00	0.79			116	1	26%	0%	0%	0	1												
casual labour	sp/ton	781.9	1	1	781	1.00	1.00				781	1.00	0.00			781	1	26%	0%	0%	0	1												
buildings maintenance	sp/ton	1.125	1	1	1	0.50		1.00			1	0.00	0.79	0.00	0.00	1	1	26%	0%	0%	0	1												
machines maintenance	sp/ton	0.5	1	1	1	0.50		1.00			1	0.00	0.79	0.00	0.00	0	1	26%	0%	0%	0	1												
furniture maintenance	sp/ton	0.125	1	1	1	0.50		1.00			0	0.00	0.79	0.00	0.00	0	1	26%	0%	0%	0	1												
transportation maintenance	sp/ton	0.25	1	1	1	0.50		1.00			0	0.00	0.79	0.00	0.00	0	1	26%	0%	0%	0	1												
bags maintenance	sp/ton	52.75	1	1	53	0.50		1.00			53	0.00	0.79	0.00	0.00	42	1	26%	0%	0%	0	1												
TOTALS		0	0	1	0	1.00		1.00			0	0.00	0.79	0.00	0.00	0	1	26%	0%	0%	0	1												
TOTALS															781 200 0 0 981 781 159 0 0 940																			
BUDGET #3 - POST-HARVEST ACTIVITY PROCESSING																																		
Budget information																																		
B3 INTERMEDIATE INPUT	Unit	Price	Quantity	Freq	TOTAL	Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price	Wages Discrepancies L:NO	Taxes on L -O	K	ad valorem	TI	fixed	Exch Rate											
							L:NO	L:O	K	TI		L:NO	L:O	K	TI																			
packing and wrapping materials for seeds	sp/ton	137.6	1	1	138	0.50	0.05	0.05	0.10	0.30	69	0.05	0.04	0.10	0.24	60	1	26%	0%	23.5%	0	1												
energy	sp/ton	6.4	1	1	6	0.50	0.01	0.03	0.04	0.92	6	0.01	0.02	0.04	1.06	7	1	26%	0%	-13.0%	0	1												
fuel	sp/ton	375.3	1	1	375	0.50	0.05	0.10	0.10	0.75	375	0.05	0.08	0.10	1.25	555	1	26%	0%	-40.0%	0	1												
water	sp/ton	12	1	1	12	0.50	0.10	0.10	0.40	0.40	12	0.10	0.08	0.40	0.40	12	1	26%	0%	0.0%	0	1												
spare parts	sp/ton	210.1	1	1	210	0.50	0.05	0.05	0.10	0.80	210	0.05	0.04	0.10	0.67	180	1	26%	0%	20.0%	0	1												
Stationery materials	sp/ton	16.5	1	1	17	0.50	0.05	0.05	0.10	0.80	17	0.05	0.04	0.10	0.79	16	1	26%	0%	1.0%	0	1												
materials transportation	sp/ton	0.1	1	1	0	0.50	0.05	0.05	0.10	0.80	0	0.05	0.04	0.10	0.79	0	1	26%	0%	1.7%	0	1												
Different materials	sp/ton	0.2	1	1	0	0.50	0.05	0.05	0.10	0.80	0	0.05	0.04	0.10	0.79	0	1	26%	0%	1.7%	0	1												
Transportation of labor	sp/ton	21.7	1	1	22	0.50	0.05	0.05	0.10	0.80	22	0.05	0.04	0.10	0.98	25	1	26%	0%	-18.0%	0	1												
reimbursement of transportation costs to farmers	sp/ton	0	1	1	0	0.50	0.05	0.05	0.10	0.80	0	0.05	0.04	0.10	0.80	0	1	26%	0%	-18.0%	0	1												
Interest on Revolving Fund	at market	5.5%	42590	0.25	596				1.00	1.00	0	0.00	0.00	0.00	0	1	26%	0%	0%	0	1													
	at social	3.0%	61045	0.25	458				0.00	0.00	0			1.00	458	1	26%	0%	0%	0	1													
TOTAL		rate	amount	year			39	58	667	532	1297	39	46	539	609	1313	1	26%	0%	0%	0	1												
BUDGET #3 - POST-HARVEST ACTIVITY PROCESSING																																		
B2 COMMODITY IN PROCESS																																		
Unit	Price	Quant	TOTAL												TOTAL Market	TOTAL Social																		
raw cotton at ginney gate	ton	13210	3 125	41281	1.00 0.00											41281	59699																	
TOTAL															41281	59699																		
BUDGET #3 - POST-HARVEST ACTIVITY PROCESSING																																		
B3 REVENUES																																		
Unit	Price	Quant	TOTAL												TOTAL Market	TOTAL Social																		
lint cotton	ton	54075	1	54075												54075	48196																	
seed	ton	6350	1 96875	12502												12502	12502																	
waste1	ton	13630	0.1	1472												1472	0																	
TOTAL REVENUES															68049	62170																		
TOTAL COST															43950	62170																		
PROFIT (BEFORE TAXES)															24199	0																		
B3 DIRECT TAXES															0	0																		
TOTAL															0	0																		
PROFIT (AFTER TAXES)															24199																			

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BUDGET #4 - POST-HARVEST ACTIVITY PROCESSING TO WHOLESALE																		
SYSTEM network irrigated cotton large ginery																		
MAIN OUTPUT lint cotton		CURRENCY sp		CONVERSION RATE		MAIN OUTPUT		BY PRODUCT										
LENGTH OF PRODUCTION CYCLE		PRODUCTION UNIT ton		1.000		1.000		0.0%										
Budget #0 computed in		sp by ton of lint cotton		Losses (%)		0.0%		0.0%										
----- TOTAL ANNUAL CAPITAL COST -----																		
B4 FIXED INPUT	Life Time	Used up Value	Capital Cost Market	Social	Initial Cost	Salvage Value	Recovery rate	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price	
								L	L	K	Ti		L	L	K	Ti		
								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS																		
BUDGET #4 - POST-HARVEST ACTIVITY PROCESSING TO WHOLESALE																		
----- Budget information -----																		
B4 DIRECT LABOR	Unit	Price	Quantity	Freq	TOTAL	Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price		
							L	L	K	Ti		L	L	K	Ti			
							1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
							0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
TOTALS																		
BUDGET #4 - POST-HARVEST ACTIVITY PROCESSING TO WHOLESALE																		
----- Budget information -----																		
B4 INTERMEDIATE INPUT	Unit	Price	Quantity	Freq	TOTAL	Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price		
							L	L	K	Ti		L	L	K	Ti			
Transportation from ginery to harbour	sp/ton		391	1	391	1.00	0.05	0.05	0.10	0.80	391	0.05	0.04	0.10	0.98	456		
			0	0	0	0.00				1.00	0	0.00	0.00	0.00	0.00	0		
Interest on Revolving Fund	at market	5.5%	54426	0	0				1.00	0.00	0			0.00	0.00	0		
	at social	3.0%	48652	0	0				0.00	0.00	0			1.00	0.00	0		
TOTAL																		
BUDGET #4 - POST-HARVEST ACTIVITY PROCESSING TO WHOLESALE																		
----- Budget information -----																		
B4 COMMODITY IN PROCESS	Unit	Price	Quant	TOTAL	Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price			
						L	L	K	Ti		L	L	K	Ti				
lint cotton	ton	54075	1	54075	1.00					54075					48652			
TOTAL																		
BUDGET #4 - POST-HARVEST ACTIVITY PROCESSING TO WHOLESALE																		
----- Budget information -----																		
B4 REVENUES	Unit	Price	Quant	TOTAL	Fund	Disaggregation at market price				TOTAL Market Price	Disaggregation at social price				TOTAL Social Price			
						L	L	K	Ti		L	L	K	Ti				
lint cotton	ton	54075	1	54075						54075					48652			
TOTAL REVENUES																		
TOTAL COST																		
PROFIT (BEFORE TAXES)																		
B4 DIRECT TAXES																		
TOTAL																		
PROFIT (AFTER TAXES)																		
48652 <==== (parity price of main final output)																		
-391																		

TABLE 1. BUDGET SUMMARY		network irrigated cotton large ginery						July 2004												
		UNIT Thaousands sp by Ha																		
		----VALUES AT MARKET PRICE----						---- VALUE SOCIAL PRICE ----						---DIVERGENCES---						
		FARM	Budget #2	Budget #3	Budget #4	POST FARM	Repre. System	FARM	Budget #2	Budget #3	Budget #4	POST FARM	Repre. System	FERME	Budget #2	Budget #3	Budget #4	POST FARM	Repre. System	
1.	TOTAL REVENUES	106	50	83	66	83	138	73	73	76	59	76	76	33	-22	7	7	7	62	
	Main final ouput	50	50	66	66	66	66	73	73	59	59	59	59	-22	-22	7	7	7	7	
	By-products	0	0	17	0	17	17	0	0	17	0	17	17	0	0	0	0	0	0	
2.	TOTAL COST	80	50	53	66	54	83	125	73	76	59	76	129	-45	-22	-22	7	-22	-45	
	A. Commodity in process		50	50	66	50			73	73	59	73			-22	-22	7	-22	0	
	(tax+,subsidy-)	-55	0	0	0	0	-55													
	B. Tradables	27	0	1	0	1	28	33	0	1	0	1	34	-6	0	0	0	0	-7	
	C. Domestic Factors	53	0	2	0	2	55	92	0	2	0	2	94	-39	0	0	0	0	-39	
	Unskilled Labor	35	0	1	0	1	36	36	0	1	0	1	37	-1	0	0	0	0	-1	
	Skilled Labor	2	0	0	0	0	3	2	0	0	0	0	2	0	0	0	0	0	0	
	Capital	15	0	1	0	1	16	53	0	1	0	1	54	-38	0	0	0	0	-38	
	PROFIT BEFORE-TAXES:	26	0	29	0	29	55	-52	0	0	0	0	-52	78	0	29	0	29	107	
	Direct taxes:	0	0	0	0	0	0													
	PROFIT AFTER-TAXES:	-29	0	29	0	29	55							(+=tax,-=subsidy)						
		UNIT sp by ton of lint cotton																		
		----VALUES AT MARKET PRICE----						---- VALUE SOCIAL PRICE ----						---DIVERGENCES---						
		FARM	Budget #2	Budget #3	Budget #4	POST FARM	Repre. System	FARM	Budget #2	Budget #3	Budget #4	POST FARM	Repre. System	FERME	Budget #2	Budget #3	Budget #4	POST FARM	Repre. System	
1.	TOTAL REVENUES	86851	41281	68049	54075	68049	113619	59957	59699	62170	48652	62626	62883	26895	-18418	5879	5423	5423	50736	
	Main final ouput	41281	41281	54075	54075	54075	54075	59699	59699	48196	48652	48652	48652	-18418	-18418	5879	5423	5423	5423	
	By-products	258	0	13974	0	13974	14231	258	0	13974	0	13974	14231	0	0	0	0	0	0	
2.	TOTAL COST	65474	41281	43850	54466	44269	68462	102785	59699	62170	48652	62666	105752	-37311	-18418	-18320	5814	-18397	-37290	
	A. Commodity in process		41281	41281	54075	41281			59699	59699	48196	59699			-18418	-18418	5879	-18418	0	
	(tax+,subsidy-)	-45313			0	0	-45313													
	B. Tradables	21990	0	621	313	934	22924	27126	0	792	381	1174	28299	-5136	0	-171	-69	-240	-5376	
	C. Domestic Factors	43484	0	1975	78	2054	45538	75659	0	1719	74	1794	77453	-32175	0	256	4	260	-31915	
	Unskilled Labor	28947	0	837	20	857	29804	29960	0	835	20	855	30815	-1013	0	2	0	2	-1011	
	Skilled Labor	1933	0	268	20	287	2220	1720	0	212	16	228	1948	213	0	55	4	59	272	
	Capital	12604	0	870	39	910	13514	43979	0	672	39	711	44690	-31375	0	199	0	199	-31176	
	PROFIT BEFORE-TAXES:	21377	0	24199	-391	23780	45157	-42828	0	0	0	0	-42869	64205	0	24199	-391	23820	88026	
	Dircet taxes:	0	0	0	0	0	0													
	PROFIT AFTER-TAXES:	-23935	0	24199	-391	23808	45157							(positive=tax, negative=subsidy)						
		Coefficient Farm /Final Product:						1.216												
		Coefficient Budget #2 /Final Product:						0.320												
		Coefficient Post-processing /Final product:						1.000												

Indicator	Formula	Value
1. FINANCIAL PROFITABILITY	$[D = A - B - C]$	45 157
2. FINANCIAL COST-BENEFIT RATIO	$[C / (A - B)]$	0.502
3. SOCIAL PROFITABILITY	$[H = E - F - G]$	-42 869
4. DOMESTIC RESOURCE COST	$[G / (E - F)]$	2.240
5. SOCIAL COST-BENEFIT RATIO	$[(F + G) / E]$	1.682
6. TRANSFERS	$[L = I + J + K]$	88 026
7. NOMINAL PROTECTION COEFFICIENT (Including by-product)	$[A / E]$	1.807
7A. NOMINAL PROTECTION COEFFICIENT (Main final output only)	$[A^* / E^*]$	2.043
8. EFFECTIVE PROTECTION COEFFICIENT	$[(A - B) / (E - F)]$	2.622
9. PROFITABILITY COEFFICIENT	$[D / H]$	-1.053
10. PRODUCERS SUBSIDY RATIO	$[L / E]$	1.400
11. EQUIV. PRODUCER SUBSIDY	$[L / A]$	0.775

	At Market price	At Social price
	(% of current value)	
Yield:	2.86 0.75	6.51 1.71
FINAL OUTPUT PRICE:	8917.90 0.16	91520.68372 1.88
POST HARVEST COSTS	24364.89 8.16	-39901.54 -13.45
DOMESTIC FACTORS COSTS	90694.93 1.99	34583.92 0.45

		REVENUES				COSTS		PROFITS	
		TRADABLES INPUTS		DOMESTIC FACTORS					
PRIVATE PRICES	A	B	C	D	E	F	G	H	I
network irrigated cotton large ginery	138 160	27 875	55 374	54 911					
SOCIAL PRICES	76 466	34 412	94 182	-52 128					
DIVERGENCES	61 694	-6 537	-38 808	107 039					

		REVENUES				COSTS		PROFITS	
		TRADABLES INPUTS		DOMESTIC FACTORS					
PRIVATE PRICES	A	B	C	D	E	F	G	H	I
network irrigated cotton large ginery	113 619	22 924	45 538	45 157					
SOCIAL PRICES	62 883	28 299	77 453	-42 869					
DIVERGENCES	50 736	-5 376	-31 915	88 026					